

III. *On the classification of Australian Pyralidina.* By
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In the present paper I have put together and classified all the species of the families *Epipaschiadæ* and *Pyralididæ* (as limited) known to me as occurring in Australia. No species of either family is indigenous to New Zealand, though *Asopia farinalis* occurs (introduced).

The fauna is limited and fragmentary. Fifteen genera are given, including twenty-four species; two of these (*Aglossa* and *Asopia*), with one species each, are recently introduced from Europe; nine of the remainder are endemic, so far as is at present known. The other four are presumably derived from a Malayan source, though *Cacozelia* is not yet known, except from North America. It is not, however, possible yet to judge of the geographical distribution of this group, of which the species seem often to range very widely.

In dealing with Walker's species of Pyrales a difficulty of nomenclature occurs to which I direct attention, as it is frequent in this group. We find such names as *murcusalis* and *sabirusalis*, which are unintelligible. No mode of dealing with them is free from objection, though I think it would be most dignified to reject them altogether. The fact is that Walker named a certain number of species after historical characters, *e. g.*, from *Cræsus* he forms *cræsusalis*, which requires absolutely to be altered into *cræsialis* or *cræsalis*; and, running short of classical names, he apparently conceived the idea of making up fresh ones, adding a classical termination, and placing *-alis* after it in the same way. I propose to do with these (since entomologists are not agreed to reject nonsense-names) what I presume Walker himself wished to do, to treat them as classical names, and alter the barbarously-formed termination into conformity with classical rules; thus, in the present paper, for *ægusalis* I have written *ægalis*. Fortunately many of these names

are synonyms, and will lapse altogether. I shall, however, alter them on this principle whenever required.

I have described such new species as I happened to possess, and have also redescribed those species and genera of which the characters have previously been insufficiently given.

EPIPASCHIADÆ.

Antennæ in male with a strong horny basal process thrown back over crown. Fore wings with 12 veins, 1 generally furcate, 8 and 9 stalked out of 7. Hind wings with 8 veins, 6 and 7 from a point or stalked, 8 generally free.

Distinguished from the *Pyralididæ* only by the curiously developed process from the base of the antennæ of male; the character is, however, unique, and persists in at least ten naturally associated genera already known. The genera included in the family are *Epipaschia*, Clem., *Mochlocera*, Z., *Toripalpus*, Grote, *Homura*, Ld., and *Deuterollyta*, Ld., besides the five given below. Grote also places *Tetralopha*, Z., here; I have not seen it, but the fore wings have only 11 veins, and I have therefore little doubt that Zeller was right in referring it to the *Phycidæ*. Except the following all the genera are at present known only from North and South America. The characters of *Deuterollyta* are incompletely given by Lederer, and its distinctness is not perfectly assured.

1 a. Vein 8 of hind wings free.

2 a. Maxillary palpi of male tufted, pencil-like .. 3. *Cacozelia*.

2 b. Maxillary palpi of male filiform, simple .. 4. *Stericta*.

1 b. Vein 8 of hind wings anastomosing with 7.

2 a. Maxillary palpi present.

3 a. Basal process of antennæ long .. 2. *Catamola*.

3 b. Basal process of antennæ short .. 5. *Astrapometis*.

2 b. Maxillary palpi obsolete. 1. *Titanoceros*.

TITANOCEROS, n. g.

Clypeus flat. Ocelli present. Tongue well developed. Antennæ in male serrate, shortly ciliated; basal process very long, reaching beyond thorax, extremity naked. Labial palpi moderate, curved, ascending, slender, second joint rough beneath, terminal joint short. Maxillary palpi obsolete. Fore wings with veins 4 and 5 separate. Hind wings with veins 4 and 5 stalked. 8 anastomosing with 7.

This and the following genus, with *Astrapometis*, differ from all the rest in having vein 8 of the hind wings anastomosing with 7 instead of free. From *Catamola* the present genus is distinguished by the absence of maxillary palpi, and the more largely developed basal process of the antennæ, of which the apex appears to be naturally naked.

1. *Titanoceros cataxantha*, n. s.

♂, 19 mm. Head, palpi, antennæ, and thorax dark fuscous, mixed with reddish fuscous; extremity of patagia whitish ochreous. Abdomen pale ochreous. Legs dark fuscous, apex of tarsal joints whitish. Fore wings triangular, costa slightly arched, apex obtuse, hind margin somewhat obliquely rounded; dark fuscous, somewhat mixed with reddish fuscous; an ochreous whitish line from costa at two-thirds to before anal angle, middle half curved outwards; beyond this the hind marginal area light reddish fuscous, mixed with dark fuscous towards anal angle; hind margin dotted with dark fuscous. Hind wings deep yellow, with a rather broad blackish hind marginal band; cilia dark grey, tips paler.

Easily recognised by the deep yellow hind wings.

Sydney, New South Wales. One specimen in the collection of Mr. G. H. Raynor, probably bred.

CATAMOLA, n. g.

Clypeus flat. Ocelli present. Tongue well developed. Antennæ in male flatly subdentate, shortly ciliated ($\frac{1}{2}$); basal process long, reaching prothorax. Labial palpi moderate, curved, ascending, second joint smooth, terminal joint short. Maxillary palpi short, filiform. Fore wings with 1 strongly furcate, 4 and 5 separate or stalked. Hind wings with 4 and 5 separate or stalked, 8 anastomosing with 7.

The stalking or separation of veins 4 and 5 afford no character of value in this genus; both forms occur well marked in *C. funerea* (male). In *C. funerea* vein 10 of the fore wings is approximated to 7 before 8 for a short distance, as if about to anastomose. In all the species there is a tuft of raised scales on fold.

1 a. Head and thorax black.

2 a. Hind wing light yellow 3. *xanthomelalis*.

2 b. Hind wing whitish 4. *funerea*.

1 b. Head and thorax not black. 2. *thyridalis*.

2. *Catamola thyridalis*, Walk.*Bertula thyrisalis* (!), Walk., Brit. Mus. Cat., 167.

♂, ♀, 23—25 mm. Head and thorax pale whitish ochreous, mixed with reddish brown. Palpi dark fuscous. Antennæ ochreous whitish. Abdomen whitish ochreous, irrorated with fuscous. Legs dark fuscous, beneath white irrorated with brownish red, posterior tibiæ and apex of joints white. Fore wings triangular, moderate, costa slightly arched towards apex, apex rounded, hind margin somewhat oblique, slightly sinuate, rounded beneath; whitish ochreous, densely irrorated and suffused with brownish red; basal third suffused with dark fuscous, except on base of inner margin, bounded by a slightly angulated line from two-fifths of costa to middle of inner margin; a tuft of raised scales on fold at one-fourth; a whitish dark-margined subdentate line at two-thirds, irregularly curved outwards in middle; space between first and second lines whitish, slightly irrorated with red, and posteriorly suffused with light ochreous; a small blackish spot on costa before middle, and another on anterior margin of second line; hind margin narrowly pale; a blackish hind marginal line, interrupted by whitish dots; cilia pale whitish ochreous, with cloudy median and apical reddish lines, and obscurely barred with dark fuscous. Hind wings grey or whitish grey, generally with a broad diffused dark hind marginal band, costa suffused with whitish; an obscure darker discal spot; cilia whitish, with a dark grey line.

I have reformed Walker's inadmissibly barbarous name.

Sydney, New South Wales. Several specimens taken by Mr. G. H. Raynor in October. Walker states that he has also received it from Ceylon.

3. *Catamola xanthomelalis*, Walk.*Acrobasis xanthomelalis*, Walk., Brit. Mus. Cat. (Cr.), 32.

♂, ♀, 30—33 mm. Head, palpi, antennæ, and thorax blackish; abdomen pale yellowish, more or less suffused with dark grey. Fore wings triangular, moderate, costa slightly arched, apex obtuse, hind margin somewhat obliquely rounded; blackish, markings obsolete; cilia blackish. Hind wings pale whitish ochreous-yellow; a moderate evenly broad rather dark fuscous-grey hind marginal band, continued to inner angle; cilia dark grey.

I have described Walker's types, not having met with the species elsewhere. It is very easily recognised. I

have not been able to examine properly the generic characters, but it is probably correctly referred here; the antennal process is quite as in *C. funerea*.

Sydney, New South Wales. Three specimens in the British Museum.

4. *Catamola funerea*, Walk.

Acrobasis funerea, Walk., Brit. Mus. Cat. (Cr.), 31.

♂, ♀, 21—23 mm. Head, palpi, antennæ, and thorax black; collar whitish. Abdomen dark fuscous, with ochreous whitish rings towards base. Legs black, apex of tarsal joints white. Fore wings elongate-triangular, costa moderately arched towards apex, apex rounded, hind margin rounded, rather oblique; blackish, irrorated with grey; markings almost obsolete, deeper black; a tuft of scales on fold at one-fourth; an irregular line at one-fourth, a discal spot, and a dentate outwards-curved line at two-thirds, sharply indented below middle; a black hind marginal line, interrupted by white dots; cilia fuscous-grey, with a darker line near base. Hind wings semitransparent, whitish, towards costa and inner angle somewhat suffused with fuscous; veins fuscous; hind margin narrowly suffused with rather dark fuscous; cilia whitish, with a dark fuscous cloudy line near base.

The black colour is protective. The species occurs at rest on the stems of fibrous-barked *Eucalypti*, which are almost invariably blackened by bush fires.

Sydney, New South Wales; Ardrossan, S. Australia. Not uncommon in October, February, and March.

CACOEZELIA, Grote.

The following species agrees entirely with the characters of this genus as given by Grote, except that veins 4 and 5 are separate in both wings. In view of the variability of this character within specific limits in the preceding genus, no stress can be laid on this. The long pencil of hairs which terminates the maxillary palpi of the male is strongly developed, and is the peculiar characteristic of the genus, of which one North American species is known.

5. *Cacozelia cholica*, n. s.

♂, 27—28 mm. Head and thorax ochreous-brown, mixed with dark fuscous. Palpi and antennæ dark fuscous; hair-pencil of maxillary palpi ochreous-white. Abdomen whitish. Legs dark fuscous, apex of tarsal joints white. Fore wings triangular, moderate, costa arched towards apex, apex rounded, hind margin somewhat oblique, slightly rounded, faintly sinuate below apex; ochreous whitish, almost wholly suffused with brown, and densely irrorated with dark fuscous; an ill-defined ochreous whitish blotch on inner margin at base, followed by a dark fuscous suffusion; veins suffusedly dark fuscous; a very obscure irregular dark fuscous line at one-third; an obscure dark fuscous discal spot, connected with costa by a dark suffusion; an obscure dentate dark fuscous line from costa at three-fifths to inner margin at three-fourths, bent outwards in middle, indented inwards above inner margin, followed by a pale line; a dark fuscous hind marginal line, interrupted by white dots; cilia ochreous whitish, with basal and median fuscous lines, and obscurely barred with dark fuscous. Hind wings whitish, faintly ochreous tinged posteriorly, with a moderately broad fuscous hind marginal band, becoming dark fuscous on hind margin, and shortly preceded by a cloudy fuscous line; cilia white, with a dark fuscous line near base.

This does not appear to be at all close to the American species, *C. basiochrealis*; it more nearly resembles the much darker *C. funerea*.

Duaringa, Queensland. Two specimens received from Mr. G. Barnard. I have two females from Sydney which may be the other sex of this species, but as they are darker and broader-winged, and the localities are so widely separate, it would be unsafe to assume their identity.

STRICTA, *Ld.*

The characters of the male of this genus were unknown to Lederer, as well as to Guenée; and I am not aware that they have been published. Snellen describes the male of what he considers a new species of this genus, but makes no mention of the generic characters. These give with certainty its position in this family.

Antennæ of male dentate, ciliated with tufts of hairs; basal process long, stout, reaching prothorax. The other characters are not different from the female.

6. *Stericta habitalis*, Gn.

Glossina habitalis, Gn., Pyr., 125; *Pyralis nauplialis*, Walk., Brit. Mus. Cat., 272; *P. porphyralis*, ibid, Suppl. 1243.

The male is smaller and shorter-winged than the female, which, however, itself varies very considerably in size. I have seen about a dozen females, but only one male.

Sydney, New South Wales; Mount Lofty range and Ardrossan, South Australia; in December and May.

ASTRAPOMETIS, n. g.

Clypeus flat. Ocelli present. Tongue well developed. Antennæ in male flatly dentate, ciliated; basal process short, not reaching collar. Labial palpi moderate, curved, ascending, second joint smoothly scaled, terminal joint rather short. Maxillary palpi short, filiform. Fore wings with veins 4 and 5 separate. Hind wings with veins 4 and 5 separate, 8 anastomosing with 7.

7. *Astrapometis saburalis*, Walk.

Pyralis saburalis, Walk, Brit. Mus. Cat., 914.

♂, ♀, 25—27 mm. Head and thorax grey, coarsely irrorated with dark fuscous. Palpi and antennæ dark fuscous. Abdomen light yellow ochreous, posteriorly greyish-tinged. Legs dark fuscous; posterior tibiæ yellowish. Fore wings triangular, moderate, costa almost straight, apex almost rectangular, hind margin slightly oblique, rounded beneath; fuscous-grey, markings suffusedly dark fuscous; a large blotch on costa about one-fourth, reaching half across wing, including a tuft of raised scales on fold; a smaller somewhat triangular blotch on middle of costa, surrounded by a more or less broad whitish suffusion; a very indistinct double subdentate line at four-fifths, middle third curved outwards; a hind marginal line interrupted by white dots; cilia fuscous-grey, with a darker line towards base. Hind wings pale ochreous-yellow; a moderately broad rather dark fuscous-grey border round apex, continued along hind margin, but not nearly reaching inner angle; a dark fuscous hind marginal line; cilia yellowish whitish, with a dark grey basal line.

The form of the fore wings is rather peculiar.

Sydney, New South Wales; Melbourne, Victoria. Several specimens in March.

PYRALIDIDÆ.

Antennæ without basal process. Fore wings with 12 veins, 1 simple or furcate, 8 and 9 stalked out of 7. Hind wings with 8 veins, 6 and 7 from a point or stalked, 8 free or anastomosing with 7.

- 1 a. Vein 8 of hind wings anastomosing with 7.
 - 2 a. Maxillary palpi present.
 - 3 a. Labial palpi porrected, with long rough hairs beneath 13. *Enogenes*.
 - 3 b. Labial palpi ascending, nearly smooth beneath 12. *Edematophaga*.
 - 2 b. Maxillary palpi absent.
 - 3 a. Patagia in male extremely elongated, expansible 15. *Endotricha*.
 - 3 b. Patagia in male not very long 14. *Scenedra*.
- 1 b. Vein 8 of hind wings free.
 - 2 a. Ocelli absent.
 - 3 a. Anterior femora in male with expansible brush of hairs 10. *Ocrasa*.
 - 3 b. Anterior femora in male simple.
 - 4 a. Maxillary palpi present 11. *Asopia*.
 - 4 b. Maxillary palpi absent. 6. *Cardamyla*.
 - 2 b. Ocelli present.
 - 3 a. Tongue absent 9. *Aglossa*.
 - 3 b. Tongue well developed.
 - 4 a. Fore wings in male with a thickened gland beneath costa 7. *Balanotis*.
 - 4 b. Fore wings in male without gland 8. *Stemmatophora*.

CARDAMYLA, Walk.

I have not been able to examine the characters of this genus, but they are given by Lederer, who accepts Walker's name.

8. *Cardamyla carinentalis*, Walk.

Cardamyla carinentalis, Walk., Brit. Mus. Cat., 282; Ld., Pyr., pl. vi., 9.

A very conspicuous species, which I have not yet met with.

Richmond River, New South Wales.

BALANOTIS, n. g.

Clypeus with a slight transverse ridge, or flat. Ocelli present. Tongue well developed. Antennæ in male stout, dentate, moderately ciliated with tufts of hairs ($\frac{2}{3}$ to 1). Labial palpi rather long, curved, ascending, second joint smooth, terminal joint short. Maxillary palpi short, filiform. Fore wings with vein 1 furcate, 4 and 5 separate. Hind wings with veins 4 and 5 separate or from a point, 6 and 7 short-stalked, 8 free. Fore wings in male with a thickened glandular swelling beneath costa beyond middle.

Specially characterised by the glandular swelling of the male, which is circular, and appears solid when cut through; the veins which should pass through the space occupied by this are bent so as to pass round it. In *B. recurralis* the upper margin of the cell is unusually short. *B. didymalis* is only known to me in the female sex, and is conjecturally referred here; it agrees in non-sexual characters. The larva of one species is known; it feeds in stiff silken tubes amongst the leaves of a Myrtaceous shrub. The genus has evident relationship with the *Epipaschiadæ*.

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|--|---------|-------------------------|
| 1 a. Head yellow | | 9. <i>didymalis</i> . |
| 2 b. Head not yellow. | | |
| 2 a. Second line from costa at two-thirds | .. | 10. <i>recurralis</i> . |
| 2 b. Second line from costa at four-fifths | .. | 11. <i>mnesibrya</i> . |

9. *Balanotis* (?) *didymalis*, Walk.

Cardamyla didymalis, Walk., Brit. Mus. Cat., 283.

♀, 27—30 mm. Head deep yellow. Palpi ochreous-whitish, sometimes fuscous-tinged. Antennæ grey. Thorax ochreous-whitish, somewhat mixed with yellow; a spot on each side of collar, on side of back, and on extremity of patagia dark fuscous. Abdomen whitish, segmental margins light ochreous-yellow, with central and lateral rows of dark fuscous spots. Legs dark fuscous, apex of joints whitish, posterior tibiæ whitish yellowish, beneath with dark fuscous subapical ring. Fore wings triangular, rather broad, costa somewhat arched towards apex, apex rounded, hind margin rather obliquely rounded; white, finely irrorated with light olive-green; an irregular transverse olive greenish shade near base, broad on costa; a dentate dark grey line from one-third of costa to two-fifths of inner margin, suffused with greenish; a dark grey discal spot; a dentate dark grey line, suffused with greenish, from two-thirds of costa to four-fifths of inner margin, middle third

curved outwards; an obscure interrupted greenish shade from middle of inner margin to middle of second line; a large dark grey apical blotch, connected with anal angle by three greenish spots; cilia white, broadly barred with blackish grey. Hind wings white, irrorated with greenish; costa broadly and inner margin more narrowly bright yellow; a dentate greenish line before middle, mixed with dark fuscous, and a strongly dentate blackish grey median line suffused with greenish, both terminated before costal yellow band; a large dark grey apical blotch, connected with inner angle by a row of six greenish spots; cilia white, barred with blackish grey. Wings beneath deep yellow, markings partly obsolete.

A pretty species, somewhat resembling *Cardamyla carinentalis*, of which Walker suggested that it might be the female; it has, however, distinct ocelli and maxillary palpi, and *Cardamyla* is stated by Lederer to be without either.

Brisbane, Queensland. I received my specimens from Mr. Diggles.

10. *Balanotis recurvalis*, Walk.

Salma recurvalis, Walk., Brit. Mus. Cat. (Cr.), 107.

♂, ♀, 28—32 mm. Head, palpi, and thorax whitish, sometimes partially suffused with greenish, irrorated with dark fuscous and brownish red. Antennæ grey. Abdomen ochreous-whitish, irrorated with dark fuscous. Legs dark fuscous, irrorated with white and red, apex of joints white. Fore wings triangular, moderate or rather broad, costa slightly arched towards apex, apex rounded, hind margin somewhat obliquely rounded; scales somewhat rough, tending to form tufts on fold at one-fourth, and in disc above and below middle; light fuscous or greenish, closely but irregularly irrorated with white, dark fuscous, and red scales; sometimes several short scattered black linear marks; an irregular obsolete blackish line from one-third of costa to two-fifths of inner margin; a small blackish discal spot; a dentate well-marked blackish line, followed by a pale line, from two-thirds of costa to four-fifths of inner margin, strongly curved outwards, indented inwards above inner margin; a dark fuscous hind marginal line, interrupted by whitish dots; cilia whitish, with basal third ochreous and a grey median line, barred with dark grey. Hind wings whitish, more or less suffused with grey, with a small discal spot and a broad darker grey suffused hind marginal band, becoming obsolete before reaching inner angle, and shortly preceded by an obscure darker line;

cilia white, with an ochreous or reddish grey median line, spotted with dark fuscous.

Variable to some extent in the distribution of colour ; a stoutly-built species.

Larva 16-legged, stout, undescribed ; forming firm silken galleries covered with refuse along the twigs and amongst the leaves of *Leptospermum lanigerum* (*Myrtaceæ*).

Sydney, New South Wales ; Launceston, Tasmania. Rather common from December to February, but of rather retired habits.

11. *Balanotis mnesibrya*, n. s.

♂, 20 mm. Head, thorax, and abdomen ochreous-whitish ; head tufted between antennæ. Palpi long, considerably exceeding crown, dark fuscous mixed with whitish. Antennæ white, ringed with fuscous. Legs dark fuscous, irrorated with white, posterior tibiæ and apex of joints white. Fore wings triangular, rather broad, costa somewhat arched at apex, apex rounded, hind margin rather obliquely rounded ; ochreous-whitish, scantily irrorated with dark fuscous ; costa irrorated with blackish ; a slender blackish line from costa at one-third to inner margin at two-fifths, interrupted above middle, forming a small spot on costa and another in disc, preceded by raised scales ; a black discal spot, preceded by raised scales ; a small fuscous spot on costa beyond middle ; a very slightly dentate slender blackish line from costa at four-fifths to inner margin before anal angle, sinuate outwards in middle, followed by a pale line, beyond which the hind marginal area is suffused with light fuscous ; a blackish interrupted hind marginal line ; cilia whitish, with two fuscous lines. Hind wings whitish grey, more whitish at base ; a dark grey hind marginal line ; cilia whitish, with a grey line.

Considerably smaller than the preceding, with the second line quite different.

Murrurundi, New South Wales. One specimen in November.

STEMMATOPHORA, Gn.

12. *Stemmatophora vibicalis*, Ld.

Stemmatophora vibicalis, Ld., Pyr., 457, pl. vii., 4.

I have two specimens, taken by Mr. G. Barnard near Duaringa, Queensland, which I consider undoubtedly identical with Lederer's species, which he founded on a

specimen from Ceylon. Many of the Queensland species of *Botydidæ* are also found to range as far as Ceylon. My specimens are both males, whereas Lederer's was a female, but they are truly referable to this species; they are exactly the same size as his, and agree in all particulars with his description and figure.

AGLOSSA, Latr.

13. *Aglossa cuprealis*, Hb.

Acrobasis incultella, Walk., Brit. Mus. Cat., Suppl., 1712.

Sydney, New South Wales, in November. Occurs occasionally in or near dwellings, doubtless introduced from Europe.

OCRASA, Walk.

Clypeus almost flat. Ocelli absent. Tongue well developed. Antennæ in male subdentate, ciliated with tufts of hairs (1). Labial palpi moderate, obliquely ascending, second joint smooth, thickened towards apex, terminal joint moderate, directed forwards. Maxillary palpi short, filiform. Anterior femora in male with large dense expansible brush of hairs. Fore wings with 1 furcate, 4 and 5 separate or stalked. Hind wings with 4 and 5 separate or stalked, 8 free.

Nearly allied to *Asopia*, from which it differs especially by the brush of hair on the anterior femora of the male.

1 a. Fore wings appearing greyish fuscous 14. *decoloralis*.

1 b. Fore wings appearing pale whitish ochreous .. 15. *albidalis*.

14. *Ocrasa decoloralis*, Ld.

Asopia decoloralis, Ld., Pyr., 458, pl. vii., 10.

I have both sexes; Lederer was unacquainted with the male, and could not therefore separate the species from *Asopia*. The male is rather more distinctly marked than the female, but does not otherwise differ. The species cannot be mistaken for the following.

Sydney, New South Wales. Taken by Mr. G. H. Raynor.

15. *Ocrasa albidalis*, Walk.*Ocrasa albidalis*, Walk., Brit. Mus. Cat., Suppl., 1212.

♂, ♀, 21—29 mm. Head, palpi, antennæ, thorax, abdomen, and legs pale whitish ochreous; palpi and legs irrorated with fuscous-carmine; anterior coxæ in male purple-black, brush of hairs yellow ochreous. Fore wings triangular, moderate, costa somewhat arched before apex, apex rounded, hind margin somewhat oblique, slightly rounded; ochreous-whitish or pale whitish ochreous, faintly irrorated with grey, sometimes with a few light fuscous-carmine scales; costal edge in male ochreous-yellow, in female yellowish tinged; a faint darker discal dot; a faint light fuscous-carmine or grey line from two-thirds of costa to four-fifths of inner margin, almost straight; cilia dull fuscous-carmine, with rows of ochreous-whitish dots, basal third suffused with pale whitish ochreous. Hind wings ochreous-whitish, faintly irrorated with greyish or pale carmine; cilia ochreous-whitish, posterior half suffused with pale carmine.

Superficially recalling some species of *Asopia*.

Peak Downs, Queensland; Sydney, New South Wales; Mount Lofty range, South Australia. Four specimens in March.

ASOPIA, Tr.

16. *Asopia farinalis*, L.*Pyralis fraterna*, Butl.

Does not appear to differ at all from European specimens; now a cosmopolitan species.

Sydney, New South Wales; Adelaide, South Australia; Christchurch, New Zealand; in October, and from February to April, in houses. Introduced from Europe.

Pyralis fraterna, Butl., from Japan, is simply the ordinary form of this species.

CEDEMATOPHAGA, n. g.

Clypeus in male with a rounded projection of scales, in female smooth. Ocelli present. Tongue well developed. Antennæ in male shortly dentate, strongly ciliated with tufts of hairs (3). Labial palpi in male moderate, obliquely ascending, second joint smooth, terminal joint moderate, with rather long rough erect hairs above; in female longer, ascending, second joint erect, terminal joint rather short, loosely scaled. Maxillary palpi short, filiform.

Anterior femora in male with an expansible tuft of hairs. Fore wings with 1 shortly furcate, 4 and 5 separate. Hind wings with 4 and 5 separate, 8 anastomosing with 7.

Larva feeding gregariously in large galls, 16-legged.

A curious genus, characterised by the peculiar palpi of the male and the expansible hairs of the anterior femora.

17. *Edematophaga ægalis*, Walk.

Pyralis ægusalis, Walk., Brit. Mus. Cat., 912; ? *Gauna subferralis*, ibid, Suppl., 1253.

♂, ♀, 15—22 mm. Head and palpi pale whitish ochreous, irrorated with fuscous-carmine. Antennæ whitish ochreous. Thorax grey mixed with ochreous-whitish, shoulders purplish. Abdomen ochreous-whitish, purple-shining, irrorated with dark grey, base and apex more yellow. Legs purplish carmine, mixed with dark fuscous, apex of joints whitish yellowish. Fore wings elongate-triangular, costa slightly sinuate in middle, abruptly arched before apex, apex obtuse, hind margin slightly sinuate below apex, bowed in middle, rather oblique; fuscous, somewhat purple-shining, suffused with dark fuscous towards base and inner margin; a slender curved whitish line from two-fifths of costa to three-fifths of inner margin, lower half followed by a blackish red shade; a small dark fuscous discal spot; a slender sinuate whitish line from three-fourths of costa to three-fourths of inner margin; beyond this a fuscous-red costal patch, shading into dark fuscous beneath; cilia light fuscous, with two darker lines. Hind wings fuscous, suffused with dark reddish towards inner angle; two slender whitish lines, first before, second beyond middle, obsolete on costa, broader and more conspicuous towards inner margin, much more nearly approximated on lower half; cilia fuscous, with a darker line, becoming carmine towards inner angle.

The type of *Gauna subferralis* is so poor that it can hardly be identified.

Larva feeding gregariously in large very irregularly spherical rough galls, three or four inches in diameter, on the branches of a phyllodineous *Acacia*, which was not in flower at the time of my visit, and is therefore at present not identified; the larva eats galleries through the substance of the galls, ejecting a good deal of the excrement from holes in the surface.

Brisbane, Queensland. I found the larvæ feeding in September, and bred several specimens in November and December.

ÆNOGENES, n. g.

Clypeus smooth. Ocelli present. Tongue well developed. Antennæ in male ciliated with tufts of hairs (8). Labial palpi moderate, porrected, second joint with dense long rough hairs beneath, terminal joint moderate, ending in a long pencil of hairs. Maxillary palpi short, filiform. Fore wings with 1 obsoletely furcate, 4 and 5 separate. Hind wings with veins 4 and 5 separate, 8 anastomosing with 7.

Separated from its allies by the quite different palpi.

18. *Ænogenes fugalіs*, Feld.

Botys fugalіs, Feld., Reis. Nov., pl. cxxxiv., 37.

♂, ♀, 16—17 mm. Head, thorax, and abdomen brownish ochreous, mixed with dark fuscous; anal tuft of male reddish-tinged. Palpi ochreous-whitish, mixed with dark fuscous on sides. Antennæ fuscous. Legs ochreous-whitish, somewhat mixed with dark fuscous, middle tibiæ carmine-tinged. Fore wings triangular, costa sinuate in middle, arched before apex, apex rounded, hind margin rather oblique, slightly rounded; ochreous, more or less wholly suffused with carmine-reddish, and irrorated with blackish, especially in male; anterior two-thirds of costa with very small whitish-yellowish spots; an ochreous-whitish dot near base; an irregular ochreous-whitish line from beyond one-third of costa to inner margin at two-fifths, twice dentate; a small subquadrate whitish ochreous spot following discal spot; a dentate ochreous-whitish line from costa at four-fifths to inner margin at four-fifths, slightly sinuate inwards in middle; cilia whitish, basal third fuscous-carmine, with ill-defined dark grey bars, obsolete towards apex. Hind wings dark fuscous, with an irregular yellowish band before middle; in female base suffused with yellowish, and a small yellowish patch towards inner angle suffused with dull light carmine; cilia ochreous-whitish, basal third dark fuscous.

Melbourne, Victoria; Mount Graham, South Australia. Taken commonly in October amongst grass by Mr. G. H. Raynor, but apparently limited in geographical range.

SCENEDRA, n. g.

Clypeus smooth. Ocelli present. Tongue well developed. Antennæ in male shortly dentate, ciliated with tufts of hairs (8). Labial palpi short, curved, ascending, loosely scaled, terminal joint moderate. Maxillary palpi obsolete. Fore wings with 1 furcate,

4 and 5 separate. Hind wings with 4 and 5 separate, 8 anastomosing with 7. Thorax with patagia in male somewhat elongate, pointed.

Nearly allied to *Endotricha*, from which it is separated by the well-marked furcation of vein 1 of the fore wings, and the patagia of male not conspicuously elongate. *S. externalis* is hardly likely to be truly referable here, but in the absence of the male it may be placed provisionally in this position; it may be an *Endotricha*.

- 1 a. With a reddish patch on costa before apex .. 20. *externalis*.
 1 b. Without reddish patch 19. *decoratalis*.

19. *Scenedra decoratalis*, Walk.

Pyralis decoratalis, Walk., Brit. Mus. Cat., Suppl., 1242; *P. contentalis*, ibid, 1242.

♂, ♀, 14—17 mm. Head, palpi, antennæ, thorax, and abdomen whitish ochreous. Legs dark fuscous, apex of joints whitish ochreous. Fore wings triangular, moderate, costa deeply sinuate in middle, abruptly arched towards apex, apex rounded, hind margin somewhat oblique, bent in middle; whitish ochreous, almost whitish in disc beyond first line, somewhat irrorated with brownish ochreous; a double ochreous-grey or blackish line from one-third of costa to one-third of inner margin, strongly curved outwards; a minute blackish discal dot; middle third of costa faintly dotted with white; a double ochreous-grey or blackish line from two-thirds of costa to four-fifths of inner margin, very slightly angulated outwards above middle; a suffused blackish grey patch towards middle of hind margin; sometimes the grey suffusion is more general; a blackish grey cloudy interrupted hind marginal line, forming three small black spots towards apex; cilia grey-whitish, with two dark grey lines. Hind wings with colour and lines as in fore wings, but both lines irregularly dentate; a grey apical patch; a row of hind marginal blackish grey spots; cilia as in fore wings.

Duaringa and Brisbane, Queensland; Newcastle and Sydney, New South Wales; Melbourne, Victoria; and one of the British Museum specimens, more brightly and richly marked than usual, is said to be from West Australia. Common in September, March, and April.

20. *Scenedra* (?) *externalis*, Walk.

Curena externalis, Walk., Brit. Mus. Cat., Suppl., 1253.

♀, 18 mm. Head, antennæ, thorax, and abdomen dull purplish ochreous. Palpi and legs dark purplish fuscous; a patch of snow-white scales behind middle pair of legs. Fore wings triangular, rather elongate, costa gently sinuate in middle, abruptly arched towards apex, apex obtusely angulated, hind margin hardly oblique, rounded beneath; light ochreous, purplish-tinged, becoming ashy whitish posteriorly, with scattered dark grey scales; a curved faintly double dark grey line from one-third of costa to one-third of inner margin; a dark grey discal dot; a dark grey slightly inwards-curved line from three-fourths of costa to anal angle, beyond which the hind marginal area is purplish grey, becoming deep reddish towards upper anterior angle; cilia grey-whitish, with two dark grey lines, first suffused with purple-carmine. Hind wings purplish ochreous, deeper towards hind margin; base suffused with grey; three grey slightly-curved lines forming a moderately broad median band; cilia as in fore wings.

Sydney, New South Wales. One specimen in December.

ENDOTRICHA, Z.

Characterised by the peculiarly elongated patagia of the male, and the absence of maxillary palpi. The genus is a good and natural one, but there is some variation in the neuration; vein 1 of the fore wings is simple in *E. pyrosalis* and *E. flammealis*, but minutely furcate in *E. puncticostalis*, and perhaps in other species. The affinity of the species is correctly indicated by the structure of veins 4 and 5 of both wings; in *E. heliopa* they are separate, in *E. pyrosalis* very shortly stalked, in *E. flammealis* and *E. puncticostalis* moderately stalked, and in *E. æthopa* long-stalked. The patagia are shortest in *E. heliopa* and longest in *E. æthopa*. The genus seems characteristic of India, the Malayan Islands, and Eastern Australia. Snellen has described a species from Celebes which I have not seen, but which is allied to *E. puncticostalis*, and there are several others in the British Museum unrecognised. *E. mesenterialis*, Walk., from Ceylon is closely allied to *E. puncticostalis*.

- 1 a. Hind wings more or less grey.
 - 2 a. First line of fore wings white 23. *puncticostalis*.
 - 2 b. First line of fore wings not white 24. *æthopa*.
- 1 b. Hind wings not grey.
 - 2 a. Hind wings with a dark purplish shade before middle 21. *heliopa*.
 - 2 b. Hind wings without a dark purplish shade before middle 22. *pyrosalis*.

21. *Endotricha heliopa*, n. s.

♂, 21 mm. Head, palpi, antennæ, thorax, abdomen, and legs ochreous-yellow. Fore wings triangular, rather elongate, costa slightly sinuate, moderately arched before apex, apex obtusely angulated, hind margin somewhat oblique, bent in middle; deep ochreous-yellow, becoming light purplish towards hind margin, except on costa, basal third mixed with purplish; some minute scattered black scales; a slightly irregular-curved pale yellow line from two-fifths of costa to two-fifths of inner margin; a dark fuscous discal dot; an almost straight indistinct pale yellow line from four-fifths of costa to a little before anal angle; a blackish widely interrupted hind marginal line; cilia ochreous-white, basal third carmine-fuscous. Hind wings rather light purple, finely irrorated with blackish; costa broadly pale whitish yellowish; a rather narrow deep ochreous-yellow median band, slightly curved, margined by slender pale yellow lines, beyond which is a darker purplish shade; hind marginal line and cilia as in fore wings.

Rather like *E. pyrosalis*, but broader-winged, more distinctly marked, and with the hind wings purplish towards base, the yellow colour restricted to a well-defined median band; it differs also in venation, as noted above.

Sydney, New South Wales. Two specimens in November.

22. *Endotricha pyrosalis*, Gn.

Endotricha pyrosalis, Gn., Pyr., 219 (♂); *E. ignealis*, ibid, 220 (♀); *Pyralis stilbealis*, Walk., Brit. Mus. Cat., 913 (♀); *P. docilisalis*, ibid, 913 (♀); *Messatis sabirusalis*, ibid, 918 (♂); *Paconia albifimbrialis*, ibid, Suppl., 1255 (♂); *Tricomia auroralis*, ibid, 1259 (♂); *Rhodaria robina*, Butl., Ann. & Mag. N. H. (5), ix., 96 (♂).

Guenée's descriptions are sufficiently good, and easily recognisable. The male has the most elongate wings of

the genus; the female is considerably broader-winged, and much less yellow.

Brisbane, Queensland; Sydney, New South Wales; Melbourne, Victoria; and Launceston, Tasmania. Generally common in September, and from January to March. I suspect, however, that it does not occur west of the Ninety-Mile Desert.

23. *Endotricha puncticostalis*, Walk.

Rhisina puncticostalis, Walk., Brit. Mus. Cat., Suppl., 1924; *Endotricha ustalis*, Snell., Tijds. v. Ent., 1880, 201.

♂, ♀, 14–16 mm. Head, palpi, antennæ, thorax, and abdomen whitish ochreous, mixed with ochreous and sometimes irrorated with dark fuscous. Legs ochreous-whitish, anterior pair dark fuscous. Fore wings elongate-triangular, costa very slightly sinuate in middle, slightly arched towards apex, apex rounded, hind margin rather oblique, bowed; whitish ochreous, almost wholly suffused with reddish fuscous, and irrorated with dark fuscous; costa spotted with dark fuscous and whitish; an irregular almost straight blackish-grey fascia from one-third of costa to one-third of inner margin, anteriorly suffused, posteriorly sharply defined and bordered by a white line, sometimes followed by a second less distinct; an obscure dark fuscous discal dot; an indistinct whitish line from costa at five-sixths to inner margin before anal angle, hardly sinuate, beyond which the hind marginal area is suffused with fuscous; cilia white, with two cloudy dark grey lines. Hind wings grey, with two somewhat irregular white dark-margined lines, tending to become suffused in intermediate space; first at one-third, preceded by a dark shade, second in middle, followed by a dark shade; cilia as in fore wings.

Duaringa and Peak Downs, Queensland. Several specimens received from Mr. G. Barnard. Also occurs in Java and Celebes. I have seen a specimen identified by Snellen himself with his *ustalis*.

24. *Endotricha athopa*, n. s.

♂, 22 mm. Head, palpi, and thorax reddish fuscous, mixed with ochreous and irrorated with blackish; patagia very long, blackish grey. Antennæ whitish ochreous, obscurely ringed with fuscous. Abdomen reddish fuscous, irrorated with blackish grey, suffused with ochreous towards base and on anal tuft. Legs dark fuscous, posterior pair whitish. Fore wings elongate-triangular,

costa slightly sinuate, moderately arched towards apex, apex rounded, hind margin rather oblique, bent in middle; reddish fuscous, irrorated with blackish grey, broadly paler and more ochreous beyond first line and towards anal angle; costa spotted with whitish ochreous; a pale line from one-third of costa to two-fifths of inner margin, slightly curved outwards, almost merged posteriorly in ground colour; a cloudy dark grey discal spot; a pale slightly dentate line, margined with grey, from five-sixths of costa to before anal angle, bent outwards beneath costa; cilia ochreous-white, carmine-tinged towards apex and anal angle, with a dark fuscous line near base suffused with carmine. Hind wings dark grey, suffused with whitish grey on costa and towards inner margin; an obscure irregular darker line beyond middle; cilia ochreous-white, with a dark fuscous line near base suffused with carmine.

Characterised by the entire absence of yellow or white markings.

Sydney, New South Wales. Two specimens in September.